

REMARKS

Claims 14, 15 and 17-26 are pending. Claims 1-13 and 16 are currently canceled. Claims 14 and 17 are currently amended. The Applicant respectfully requests entry of the amendments since they should put the case in condition for allowance. Reconsideration of the application is requested.

§ 112 Rejections

Claims 14-15 and 17-26 stand rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner has stated that in claim 14, the phrase, "an effective amount of one or more crosslinking agents" is indefinite. The Applicant has amended claim 14 to recite "one or more crosslinking agents, in amount of less than about 0.25 wt.%, capable of effecting crosslinking of the one or more novolac phenolic resins." Support for this amendment can be found, for example, on page 7, lines 23-25 of the specification as filed. Amended claim 14 now overcomes the Examiner's rejection and the Applicant respectfully requests that the rejection be withdrawn. Claims 15 and amended claim 17 and claims 18-26 depend upon amended claim 14 and add further limitations thereto. Since amended claim 14 is patentable, likewise so are claims 15 and 17-26.

In summary, Applicant submits that the rejection of claims 14-15 and 17-26 under 35 USC § 112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention has been overcome, and that the rejection should be withdrawn.

§ 102 Rejections

Claims 14-15, 17-19, and 21-25 stand rejected under 35 USC § 102(b) as purportedly being anticipated by Ozawa et al. (U.S. 5,385,979). It is the Examiner's position that Ozawa discloses an adhesive comprising a heat-reactive phenolic resin, prepared as a novolac phenolic resin and an elastomer, such as chlorinated natural rubber, or acrylonitrile-butadiene copolymer (nitrile butadiene rubber, as those of skill in the art would know).

The Applicant has amended claim 14 to recite that “the one or more elastomers are selected from natural rubber, butyl rubber, nitrile butadiene rubber, synthetic polyisoprene, ethylene-propylene rubber, ethylene-propylene-diene monomer rubber (EPDM), polybutadiene, polyisobutylene, poly(alpha-olefin), styrene-butadiene random copolymer, fluoroelastomers, silicone elastomers, and combinations thereof.” The Applicant has also amended claim 17 to conform to amended claim 14 and to avoid antecedent basis issues. The Examiner has not shown that Ozawa teaches or discloses a heat-activatable adhesive made as described in Applicant’s claim 14 with the above recited group of elastomers. The Applicant respectfully asserts that the Examiner has misread the Ozawa reference. The adhesive compositions of Ozawa are based on chlorinated polyolefins having chlorine contents greater than about 60 percent and molecular weights greater than 500 (see abstract of Ozawa). The purpose of the adhesive compositions of Ozawa is found in col. 1, lines 15-17, and is “for bonding elastomeric materials to metal surfaces.” In col. 1, lines 24-30 Ozawa teaches that the “chlorinated natural and synthetic rubbers have been found to provide excellent film-forming properties, adhesional affinity for both metal surfaces and vulcanizing elastomers,...” The Examiner has not shown that Ozawa teaches adhesive compositions that have any of the elastomers listed in Applicant’s claim 14. The Examiner has stated (on page 8 of the Office Action of 12/05/08) that Ozawa discloses an adhesive composition and an elastomer, such as chlorinated natural rubber, or acrylonitrile-butadiene copolymer (column 5, lines 54-65 and column 7, lines 25-33 of Ozawa. It is the Examiner’s position that although claim 14 does not specifically recite chlorinated natural rubber, the instant claims do not exclude the natural rubber of Ozawa from being chlorinated. The Applicant is confused by this statement. The Examiner has already admitted that Ozawa discloses chlorinated natural rubber. The Examiner further states that “[b]ecause the multilayer article of the instant invention comprises the various materials, the chlorinated natural rubber material in the adhesive composition of Ozawa, is not excluded from the disclosure of the instantly claimed invention.” The Applicant respectfully points out that claim 14 does not claim a multilayer article. Rather, the Applicant’s claim 14 is to a heat activatable adhesive that includes at least three elements (elastomer, novolac phenolic resin, and crosslinker). There is no mention of a “multilayer article” as stated by the Examiner. The Furthermore, it is the Applicant’s position that one of skill in the art would know that natural rubber comes from the rubber tree and is known to be mostly polyisoprene and is also known to be non-

chlorinated as naturally produced. As support, the Applicant is submitting a copy of a chapter of a well-known book in the polymer science field, *Introduction to Physical Polymer Science*, 2nd Edition, by L. H. Sperling, pg. 122-125 (1992), as an addendum. Page 153, section 4.5.1 of this book discloses that natural rubber polymer "is a highly linear cis-1,4-polyisoprene of about 5×10^5 g/mol. This supports the Applicant's contention that the term "natural rubber" in amended claim 14 is non-chlorinated and it not anticipated by Ozawa.

Ozawa does not teach any of the elastomers in the group listed in Applicant's current claim 14. For at least this reason, the Examiner's rejection is improper and should be withdrawn. Claims 15, 17-19, and 21-25 depend upon amended claim 14 and add further limitations thereto. Since amended claim 14 is patentable, likewise so are claims 15, 17-19, and 21-25.

The rejection of claims 14-15, 17-19, and 21-25 under 35 USC § 102(b) as purportedly being anticipated by Ozawa et al. (U.S. 5,385,979) has been overcome and should be withdrawn.

§ 103 Rejections

Claim 20 stands rejected under 35 USC § 103(a) as purportedly being unpatentable over Ozawa et al. (U.S. 5,385,979) in view of Fleming et al. (U.S. 2,839,433).

The Applicant has already shown that Ozawa does not teach or suggest the elastomers in Applicant's amended claim 14. Fleming does not add to this teaching. For at least this reason, the combination of Ozawa and Fleming does not teach all of the elements of Applicant's amended claim 14. Claim 20 depends upon amended claim 14 and adds further limitations thereto. Since amended claim 14 is now patentable, likewise so is claim 20.

In summary, the rejection of claim 20 under 35 USC § 103(a) as purportedly being unpatentable over Ozawa et al. (U.S. 5,385,979) in view of Fleming et al. (U.S. 2,839,433) has been overcome and should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application as amended is requested.

Telephonic Interview

The applicant wishes to thank Examiner Lawrence Ferguson for the telephonic interview regarding the merits of the case that was held on January 26, 2009. During the interview, the

final OA of the subject case was discussed. The Applicant respectfully asserted that Ozawa (US 5,385,979) does not disclose non-chlorinated elastomers such as acrylonitriles-butadiene copolymer rubber. Col. 7, lines 23-35 of Ozawa are directed towards a material which may be bonded to a surface such as a metal surface but is not the adhesive composition. The Applicant additionally asserted that the adhesive composition of Ozawa are based upon chlorinated polyolefins having significantly high chlorine contents (see col. 1, lines 7-12) and that can contain additional “halogenated polymeric material[s]” as is recited in col. 5, lines 54 through col. 6, lines 1-11.

The Examiner has questioned whether natural rubber can be chlorinated and thus would anticipate or be obvious in light of Ozawa. The Applicant is submitting a copy of a chapter of a well-known book in the polymer science field, *Introduction to Physical Polymer Science, 2nd Edition*, by L. H. Sperling, pg. 122-125 (1992), as an addendum. Page 153, section 4.5.1 of this book discloses that natural rubber polymer “is a highly linear cis-1,4-polyisoprene of about 5×10^5 g/mol.” This supports the Applicant’s contention that the term “natural rubber” in amended claim 14 is non-chlorinated and it not anticipated by Ozawa.

The Applicant also discussed the rejection under 35 USC § 112, second paragraph regarding the “effective amount of crosslinking agents.” The Applicant have amended this section of claim 14 to read “one or more crosslinking agents, in an amount of less than about 0.25 wt.%”. The Examiner indicated that such a change should be acceptable and should overcome the 35 USC § 112, second paragraph rejection.

Addendum

An addendum that contains a copy of a chapter of a well-known book in the polymer science field, *Introduction to Physical Polymer Science, 2nd Edition*, by L. H. Sperling, pg. 122-125 (1992) is being submitted with this document and should be considered part of this response.

Respectfully submitted,

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Date

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